

AMENDMENTS TO THE SPECIFICATION AND ABSTRACT

In the specification, page 1, after the title, please insert the following heading:

BACKGROUND OF THE INVENTION

In the specification, page 1, line 5, please amend the sub-heading as follows:

1. TECHNICAL FIELD OF THE INVENTION

In the specification, page 1, line 13, please amend the sub-heading as follows:

2. DESCRIPTION OF THE RELATED BACKGROUND ART

In the specification, page 1, paragraph [0002], please amend the paragraph as follows:

There have been three-dimensional shape displaying devices for drawing a three-dimensional shape by using a Z buffer algorithm as a hidden surface removal system. Also, there have been techniques for increasing a speed of drawing processing of such a three-dimensional shape displaying device, for example, a technique in which each pixel contains one bit flag memory (e.g., patent document 1) and a technique which uses a degenerated Z buffer for, among a plurality of depth values of pixels, storing a depth value of a farthest pixel from a view point and a depth value of a nearest pixel from the view point (e.g., patent document 2).

In the specification, page 4, paragraph [0013], please amend the paragraph as follows:

As described above, the conventional three-dimensional shape drawing device ~~described~~ described in the patent document 2 accesses the Z main buffer 206 only when the Z value of the pixel to be newly drawn is between the maximum Z value and the minimum Z value of the block

in which the pixel is positioned. As a result, the frequency of accessing the Z main buffer 206 is reduced.

[Patent Document 1] Japanese Laid-Open Patent Publication No. 62-42281

[Patent Document 2] Japanese Laid-Open Patent Publication No. 8-161526 (pages 5-7, FIGS. 1 and 4)

In the specification, page 4, lines 17 and 18, please amend the heading as follows:

~~DISCLOSURE OF THE INVENTION~~

~~PROBLEMS TO BE SOLVED BY THE INVENTION~~

BRIEF SUMMARY OF THE INVENTION

In the specification, page 5, line 10, please amend the heading as follows:

~~SOLUTION TO THE PROBLEMS~~

In the specification, page 8, line 15, please amend the heading as follows:

~~EFFECT OF THE INVENTION~~

In the specification, pages 8-9, paragraph [0019], please amend the paragraph as follows:

~~[FIG. 1]~~ FIG. 1 is a functional block diagram showing a configuration of a three-dimensional shape drawing device according to an embodiment of the present invention.

~~[FIG. 2]~~ FIG. 2 is a diagram schematically showing a depth value retained by a high order Z-buffer memory 102 and a low order Z-buffer memory 104.

~~[FIG. 3]~~ FIG. 3 is a flowchart showing operations of the three-dimensional shape drawing device shown in FIG. 1.

~~[FIG. 4]~~ FIG. 4 is a flowchart showing a detailed process at subroutine step S19 shown in FIG. 3.

~~[FIG. 5]~~ FIG. 5 is a block diagram showing an exemplary hardware configuration of the three-dimensional shape drawing device.

~~[FIG. 6]~~ FIG. 6 is a block diagram showing an exemplary hardware configuration of the three-dimensional shape drawing device.

~~[FIG. 7]~~ FIG. 7 is a block diagram showing a configuration of a three-dimensional shape drawing device 200 described in a patent document 2.

~~[FIG. 8]~~ FIG. 8 schematically shows a screen 214 for displaying a three-dimensional shape drawn by the three-dimensional shape drawing device of FIG. 7 and a configuration of a ZR buffer 205.

In the specification, page 9, line 21, please amend the heading as follows:

DESCRIPTION OF THE REFERENCE CHARACTERS

In the specification, pages 9-10, paragraph [0020], please amend the paragraph as follows:

- _____ 101 drawing section
- _____ 102 high order Z-buffer memory
- _____ 103 image memory
- _____ 104 low order Z-buffer memory
- _____ 105 high order bit comparing section

106	low order bit comparing section
107	high order Z-buffer clearing section
108	low order Z-buffer clearing section]
110	depth value calculation section
111	brightness and material calculation section
121	CPU
122	high speed graphics memory
123	low speed graphics memory
201	image composing section
202	drawing processing section
203	frame buffer
204	palette circuit
205	ZR buffer
206	Z main buffer
207	display section
208	image supply section
209	pixel drawing section
210	drawing determination section
211	maximum Z value within a block
212	minimum Z value within a block
213	example of a block resulting from dividing a screen
214	screen
401, 402	figures

————— 403 pixel comprising a figure

In the specification, page 11, line 2, please amend the heading as follows:

~~BEST MODE FOR CARRYING OUT~~ DETAILED DESCRIPTION OF THE INVENTION

In the specification, page 30, line 2, please amend the heading as follows:

~~INDUSTRIAL APPLICABILITY~~